

REMARKS

Reconsideration of the pending application is respectfully requested on the basis of the following particulars.

1. In the claims

The claims are amended as shown in the Amendment to the Claims. Particularly, claims 18, 27, 37 and 39 are amended with the subject matter of claims 19, 28/29, 34 and 40/41, respectively. As a result, claims 19, 28, 29, 34, 40 and 41 are cancelled. The pending claims are also amended to include minor changes to the language which does not affect the scope of the claims. The language revisions improve the clarity of the subject matter for which protection is sought irrespective of any rejection established in the outstanding action.

New claims 49-51 are now included in the pending claims. Support for claim 49 is provided from the subject matter of original claim 29. Claims 50 and 51 find support on page 4, third paragraph and figure 7.

It is submitted that the amendment to the claims, and the new claims all find proper support from the specification and the drawings. Acknowledgment of entry of the amendment to these claims is respectfully requested in the next Office communication.

Since claim 29 is cancelled, the rejection of this claim under 35 U.S.C. 112, second paragraph is moot.

2. Rejection of claims 18, 19, 27, 33, 34 and 39 under 35 U.S.C. § 102(e) as being anticipated by U.S. patent 6,046,073 ("Lang")

Withdrawal of this rejection is respectfully requested in view of the amendment to independent claims 18, 27, 37 and 39. The remaining claims depend from one of the independent claims, and are patentable based on their dependency therefrom.

The independent claims are patentable over Lang because nowhere in Lang is there any disclosure or suggestion of providing a card and corresponding thinned chip with conductive paths after the thinned chip is applied to a surface of the card. To the contrary, as will be discussed below, Lang teaches a chip that already includes conductive paths when it is applied to the card, and the process of thinning the chip only after it is applied to the card.

Lang describes a process for manufacturing thinned semiconductor chips for incorporation into a chip card cavity. Lang teaches first mounting the chip on a contact surface with the front side of the chip facing towards the contact surface of the card (col. 1, lines 49 – 61). This effectively leads to “electrically connecting” the contact surfaces 3 of the chip to the card (col. 1, lines 53-56; col. 3, lines 1-4). Thus, in view of the contacts surfaces, it is readily evident that conductive paths are provided on both the chip and card prior to securing the chip to the card.

Lang specifies that it is important that the chip is first of all fitted to the contact surfaces, and that thinning by etching occurs after such a step. This is because this process provides a simple and cost effective solution to the problem of the difficulty in handling the separation of wafers that have been etched on the rear side (col. 3, lines 39-44). Lang does not suggest any other manner for providing the contact surfaces.

Because Lang teaches “electrically connecting” the chip to the card, this prior art patent cannot be construed to teach “providing the card and chip with conductive paths,” as required by method claims 29 and 33 of the instant application. Moreover, apparatus claims 27 and 39 require that the conductive paths are printed on the outside of the smart card and the chip. This of course is in contradistinction to the teachings of Lang wherein the contact surfaces 3 are formed prior to securing the chip to the card.

There is no suggestion in Lang of providing the card and chip with conductive paths after the card and chip are applied to one another. This is clearly evidenced by the teachings of Lang which describe protecting edges of the chip that are oriented

toward the contact surface with a protective covering prior to a plasma etching step (col. 1, lines 62-65).

While the pending claims of the instant application require that the chip be thinned prior to securing it to the card, Lang teaches the express opposite. More particularly, Lang specifies that the chip is thinned by plasma etching after the chip is secured to the card (col. 1, lines 57-61) and electrically coupled therewith (col. 1, lines 53-56).

Turning specifically to pending claim 46 of the instant application, claim 46 requires that the chip is thinned prior to its placement over at least portions of the plurality of contacts provided on the external surface of the card body. Of course, as pointed out above, Lang does not teach this step.

In view of these observations, it is respectfully submitted that the pending claims are patentable over Lang on the basis that Lang neither discloses nor suggests every feature required by these claims. As a result, the pending claims are not anticipated by Lang. Withdrawal of this rejection is thus respectfully requested.

3. Rejection of claims 20-22, 28-32, 35-38 and 40-48 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent 6,046,073 ("Lang") in view of U.S. patent 6,412,701 ("Kohama")

It is submitted that Kohama does not make up for the aforementioned shortcomings with regards to Lang. Therefore, the proposed combination of Kohama and Lang does not include every limitation required by the pending claims. Moreover, as indicated above, there is no evidence in Lang which would motivate one skilled in the art to modify this patent, either based on the teachings of Lang or Kohama, to print conductive paths after the chip is placed on the card, and to thin the chip only after it is already placed on the card.

Thus, the proposed combination of Lang and Kohama does not render the claims *prima facie* obvious. Withdrawal of this rejection is therefore respectfully requested.

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Examiner: J. D. Sells

Art Unit: 1734

4. Conclusion

As a result of the amendment to the claims, and further in view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is respectfully requested that every pending claim in the present application be allowed and the application be passed to issue.

If any issues remain that may be resolved by a telephone or facsimile communication with the applicants' attorney, the examiner is invited to contact the undersigned at the numbers shown below.

BACON & THOMAS, PLLC
625 Slaters Lane, Fourth Floor
Alexandria, Virginia 22314-1176
Phone: (703) 683-0500
Facsimile: (703) 683-1080

Date: February 15, 2006

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Justin J. Cassell", written in a cursive style.

JUSTIN J. CASSELL
Attorney for Applicants
Registration No. 46,205